

## Introduction: Coastal and Northern Processes, Landforms, and Sediments

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For his academic contributions, Brian was presented with the "Service to Geography in Ontario" award by the Ontario Division of the Canadian Association of Geographers in 1996. The following year, he was a worthy recipient of the CAG Award for "Service to the Profession of Geography". His research and his teaching, and his contributions to professional and scholarly organizations have helped to shape the science of geomorphology in Canada. He was a teacher, scholar, mentor and friend for a whole generation of physical geographers in Canada.

Mary-Louise Byrne and Phil Howarth

## Introduction

# COASTAL AND NORTHERN PROCESSES, LANDFORMS, AND SEDIMENTS

In this issue of *Géographie physique et Quaternaire* a set of papers recognizing the influence that Brian McCann had on the study of coastal and northern landscapes in Canada is presented. These papers, that provide a snapshot of the studies that Brian's students and colleagues are undertaking in Canada today, were presented at a jointly sponsored CAG-CGRG conference, held in his honour, in June 2005. The contributions illustrate the breadth of influence his work has had on physical geography in Canada. The first four papers are spearheaded by academic colleagues who taught at Canadian universities during Brian's career. The final two papers are contributed by former students who now hold academic positions in Canadian universities.

**Woo, Mollinga and Smith** present information on simulating active-layer thaw in the Boreal environment. The findings demonstrate the sensitivity of active-layer thaw to differential soil material thermal properties, moisture content, and varying inter-annual soil surface temperatures. The model allows active layer thaw responses to be easily assessed for various land uses.

**Trenhaile, Porter and Kanyaya** offer a new summary of processes acting on shore platforms of eastern Canada. In this field-based study, the authors measured erosion at several locations in the Bay of Fundy and along Gaspé Peninsula. They document the importance of wave quarrying and frost action on shore platform development.

The migration of sand in the nearshore is the focus of the study by **Greenwood, Permanand-Schwartz and Houser**. This field-based study of sand migration, bar formation and evolution on a Great Lakes shoreline concludes that the primary mechanism for bar initiation and growth in this location was the cross-shore displacement of sediment by wave-driven (oscillatory) transport and cross-shore mean currents (undertow), rather than by longshore current.

**Catto** contributes a paper that focuses on a field site located on the east coast of Canada. This work, which examines the long-term evolution of a gravel beach in Newfoundland, shows that tropical storm and hurricane activity substantially modify the beach, but that it is difficult to correlate erosional events with hurricane activity. Local factors dominate in beach evolution at this location.

The last two papers present work that focuses on the coastal zone in the Arctic. **Dale and Leontowich** document the oceanographic conditions and distribution of sediments and biota in the intertidal and subtidal zones of Igloodik Island, Nunavut. They found that few statistically significant trends are evident with respect to the distribution of organisms and depth. However, variations in species, abundances and densities result from local conditions and substrate characteristics.

The final paper examines coastal regions within Auyuittuq National Park Reserve (ANPR). **Solsten and Aitken** found that archeological sites within these coastal regions are sensitive to mass-movement processes and are threatened by flooding in response to isostatic submergence and global sea-level rise.

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Mary-Louise Byrne  
Ad hoc editor